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Notice of Allowability

Application No.

10/765,042

Applicant(s)

KWARK, YOUNG HOON

Examiner

Michael C. Zarroli

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/8/05.
2. ☒ The allowed claim(s) is/are 3-39.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

MICHAEL C. ZARROLI
PRIMARY EXAMINER



EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jim Howard on 10/6/05. This examiner amendment helps to put in condition for allowance claims 5 and 38 and bring to the forefront an important limitation the examiner feels is noteworthy.

The application has been amended as follows: **Claim 2 has been cancelled and claims 5 and 38 have been amended as shown below.**

In claim 5 lines 2-3 delete "allows contact" and replace with -- allows physical contact -- and, in claim 38 lines 3-4 delete "are compressed" and replace with -- are axially compressed --.

2. The following is an examiner's statement of reasons for allowance: Reasons for allowance of some of these claims were given in previous office actions. Reasons for all the independent claims are given below to ensure there is no confusion as to why the examiner allowed the claims.

- The prior art of record does not teach or suggest alone or in combination, the combination of elements including an array of buttons on a carrier where physical contact between adjacent buttons occurs when they are compressed beyond a predetermined threshold in claims 5 and 38.
- The prior art of record does not teach or suggest alone or in combination, the combination of elements including a chip's first surface closer to the first surface of a PCB than the second surface of each is closer each other with the first surfaces facing each other and the second surfaces facing each other in claim 11.
- The prior art of record does not teach or suggest alone or in combination, the combination of elements including the sheet with first and second holes through which first and second buttons pass respectively where the first hole compresses its button more than the second hole compresses its button in claim 33.
- Reasons for allowance for claim 36 is very similar to claim 33 and including the conductive disc.
- The following prior art was previously discussed by the examiner but is being highlighted here to avoid any confusion about allowability. The prior art of Hata et al discusses some claim elements except for adjacent buttons that come

in contact when compressed. Hata shows solder balls under the reflow process that come into contact.

- Brindle et al, Zaderej, Hougham, Nellis et al and Reylek all show compressible interposer buttons but no physical contact between adjacent buttons.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Zarroli whose telephone number is 571-272-2101. The examiner can normally be reached on 7:30 to 3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, T.C. Patel can be reached on (571) 272-2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Zarroli
Primary Examiner
Art Unit 2839

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